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Technology Center 2600 Attorney Docket No.: 01CON295P-CON

Patent

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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SEP 22 2004

Applicant(s): Thyssen et al.

Group Art Unit: 2654

Application Serial No.: 09/841,764

Examiner: Nolan, D.

Filed: April 24, 2001

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Title: Silence Description Coding for  
Multi-Rate Speech Codecs

OFFICE OF PETITIONS

REQUEST FOR REHEARING  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCESCommissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sirs:

This is a Request for Rehearing, under 37 C.F.R. § 1.196(b)(2), for reconsideration of Decision on Appeal, dated July 23, 2004, which affirmed the Examiner's rejection of claims 21-35, and reversed the Examiner's rejection of claims 36-44 and 46-53.

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### REMARKS

This Request for Rehearing is under 37 C.F.R. § 1.196(b)(2), which requires the request to "address the new ground of rejection and state with particularity the points believed to have been misapprehended or overlooked in rendering the decision and also state all other grounds upon which the rehearing is sought." For the reasons that follow applicant respectfully addresses the new ground of rejection by the Board and the points that applicant believes to have been misapprehended or overlooked.

#### A. Board's Rejection of Claims 21-35 Under 35 U.S.C. § 103(a)

Applicant appreciates the Board's statement that "Rapeli cannot be relied on for teaching that the silence description coding mode is independent of the previous speech signal coding mode", which was the primary reference being relied upon by the Examiner to reject claims 21-35 of the present application. However, the Board states that the limitation "coding a second segment of the speech signal using a silence description coding mode independent of the speech coding mode used to code the first segment of the speech signal immediately before the second segment" in the representative claim 34 is disclosed in Delargy.

It should be noted, however, the Board also shares applicant's confusion with respect to the Examiner's rejection of claims 21-35 based on Delargy. As pointed out by the Board, the Examiner uses Delargy in rejection of claim 38 under the heading for rejection of claims 21-35. Further, as pointed out by the Board, the Examiner does not cite Delargy against claims 36 and 37, which depend from claim 34.

Applicant would like to clarify the Examiner's rejection of claims based on Delargy, as follows. In response to the first Office Action, applicant amended claim 38 as follows "wherein

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the voice activity detector receives first and second segments of a speech signal and identifies a substantially speech-like characteristic of the first and second segments and an absence of a substantially speech-like characteristic of the second segment of the speech signal." In the second Office Action, and in response to applicant's amendment, the Examiner stated that the above-amended limitation of claim 38 is shown in Delargy. (See pages 3 and 5 of the Second Office Action.)

In rejecting claims 21-35, the Board states as follows:

Delargy improves upon a speech signal coding standard by coding a frame of silence with a single output byte. If the next frame is also silence, no output is generated. At the time silence is first detected, the operation in Delargy is to code the frame as a single output byte. This coding is not based on the manner in which the previous speech frame was coded and is, therefore, independent of the coding used for the speech signal. If the first segment of representative claim 34 is defined as the last frame of speech before silence in Delargy and the second segment of claim 34 is defined as the first frame of silence, then the operation of Delargy appears to meet the claimed invention. (Pages 9-10 of the Decision on Appeal.)

Applicant respectfully submits that the teaching of Delargy has been misapprehended. Delargy is proposing an improvement over G.723.1 standard for audio compression. (Col. 1, lines 46-47.) According to Delargy, in the G.723.1 standard, the encoder represents every frame containing the spectral characteristic of silence by four byte output, and for example sends 100 four byte data output for a three second pause or silence. (Col. 1, lines 33-42.) To improve G.723.1, Delargy proposes that when silence is detected, the encoder codes the silence and outputs a single byte, rather than potentially 100 four byte outputs for a three second pause or silence. (Col. 1, lines 46-55.)

Applicant respectfully submits that whether the encoder outputs a single byte of output or several hundred bytes of output, the number of bytes of output has no relation to the "coding

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scheme" used by the encoder for coding the silence. For example, Delargy is specifically directed to G.723.1. Both the silence and voice are coded according to the G.723.1 standard. There is, therefore, a clear dependency. In Delargy the frame of speech signal preceding the silence must be encoded according to the G.723.1 standard. Further, the silence is also encoded according to the G.723.1 standard, whether one or more bytes are generated and transmitted to the decoder. Accordingly, the following limitation of claim 34 "coding a second segment of the speech signal using a silence description coding mode independent of the speech coding mode used to code the first segment of the speech signal immediately before the second segment" is not shown by Delargy, because in Delargy, the silence description coding mode is a G.723.1 silence description coding and is taught to be used only as part of G.723.1, and not independent of G.723.1. In other words, Delargy teaches that G.723.1 silence coding is used if the voice signal is coded using G.723.1 voice coding.

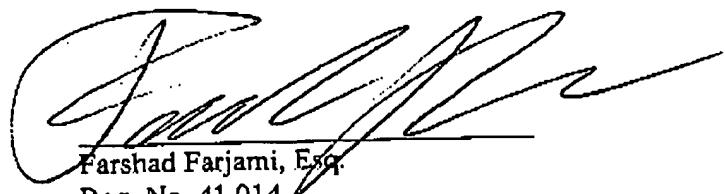
In short, Delargy teaches that G.723.1 silence coding is always preceded by G.723.1 voice coding. Therefore, whether G.723.1 silence coding of Delargy is used depends on whether G.723.1 coding is being used, i.e. whether voice signal is being coded using G.723.1 coding. In sharp contrast, claim 34 breaks away from this conventional scheme that dictates such dependence between silence coding and voice coding, and claims "coding a second segment of the speech signal using a silence description coding mode independent of the speech coding mode used to code the first segment of the speech signal immediately before the second segment."

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**B. Conclusion**

In light of the foregoing clarification, applicant respectfully requests reconsideration and allowance of claims 21-35 over Delargy and Rapeli, as these references, solely or in combination, fail to disclose, teach or suggest the invention of claims 21-35.

Respectfully Submitted;  
FARJAMI & FARJAMI LLP



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**FACSIMILE TRANSMISSION COVER SHEET**

Date: September 22, 2004

To: The United States Patent and Trademark Office

Fax: 703-872-9306

Re: Request for Rehearing before the Board of Patent Appeals and Interferences  
 Patent Application Serial No.: 09/841,764  
 Attorney Docket No.: 01CON295P-CON

From: Farjami & Farjami LLP

Number of pages including the cover sheet: 6

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